

MONTHLY WEATHER REVIEW

Editor, W. J. HUMPHREYS

VOL. 60, No. 8
W. B. No. 1084

AUGUST, 1932

CLOSED OCTOBER 3, 1932
ISSUED NOVEMBER 3, 1932

BIBLIOGRAPHY

C. FITZHUGH TALMAN, in Charge of Library

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

- Alt, E.
Klimakunde von Mittel- und Südeuropa. Berlin. 1932. iv, 288 p. figs. 27 cm. (Handbuch der Klimatologie. Bd. 3, Teil M.)
- Bartels, J.
Tides in the atmosphere. 21 p. figs. 26 cm. (Sci. mon. v. 35, Aug., 1932.)
- Egypt, Physical Dept.
Meteorological atlas of Egypt . . . Giza. 1931. xv p. 41 pl. 66½ cm.
- Giao, Antonio.
Recherches sur les perturbations mécaniques des fluides. Paris. 1930-31. pt. 1. Théorie générale des perturbations. xv, 61 p. 33 cm. pt. 2. Les perturbations atmosphériques. 96 p. pl. 33 cm. (Mém. Off. nat. mét. de France. No. 21-22.)
- Gorczyński, Władysław.
Radiación solar, total y difusa en Tacubaya segun las medidas solarimétricas y los diagramas solarigráficos. Mexico. 1932. 63 p. 23 cm. (Serv. met. Mexicano. Obs. cent. Foll. num. 4. Rad. solar.)
- Hafstad, L. R., & Tuve, M. A.
Further studies of the Kennelly-heaviside layer by the echo method. p. 1513-1522. figs. 23 cm. (Proc. inst. radio engin., v. 17, no. 9, Sept. 1929.)
- Hamburg. Deutsche Seewarte.
Dampferhandbuch für die Ostsee. Hamburg. 1931. xv, 328 p. illus. tables. maps. (part fold.) diagrs. 23½ cm.
- International commission for maritime meteorology.
Protokolle der Sitzungen in Hamburg, 5-9. April 1932. Leyde. 1932. 97 p. figs. plates (in pocket.) 24½ cm. (Sec. de l'Organ. mét. internat. No. 13.)
- International meteorological committee.
Procès-verbaux des séances du Comité météorologique international à Locarno, octobre 1931, et rapports de 3 commissions et d'une sous-commission à Innsbruck et Locarno, septembre et octobre 1931. Leyde. 1932. 385 p. figs. plates (fold.) 24½ cm. (Sec. de l'Organ. mét. internat. No. 10.)
- Musacchia, Fausto.
Ricerche sul clima di Palermo. Lo scirocco. Palermo. 1930. 93 p. 22½ cm.
- Nicholson, Seth B.
Sun-spots and the weather. p. 230-237. figs. 23 cm. (Pub. Astron. soc. Pacific. v. 44, Aug., 1932.)
- Pettit, Edison.
Measurements of ultra-violet solar radiation. 37 p. figs. pl. 25½ cm. (Carn. inst. Wash. Contrib. Mt. Wilson observ. no. 445.) (Repr.: Astro-phys. journ., v. 75, 1932.)
- Romberg, Arnold, & Blau, L. W.
New hygrometer. [Austin. 1926.] p. 717-724. illus. 24½ cm. (Journ. Optical soc. Amer. & rev. sci. instrum., v. 13, no. 6, Dec., 1926.)
- Rossby, C. G.
Generalization of the theory of the mixing length with applications to atmospheric and oceanic turbulence. Cambridge. 1932. 36 p. figs. 28 cm. (Mass. inst. tech. Met. papers, v. 1, no. 4.)
- Stebbing, E. P.
Influence of forests on rainfall, erosion and inundation. p. 359-366. 25 cm. (Contem. rev., no. 795. March 1932.)
- Tuve, M. A., & Dahl, O.
Transmitter modulating device for the study of the Kennelly-heaviside layer by the echo method. p. 793-798. figs. 23 cm. (Inst. radio engin., Proc. v. 16, no. 6, June, 1928.)
- Walter, A.
Note on the construction of a portable generator for hydrogen gas required for filling pilot and sounding balloons. n. p. [1930.] 2 p. pl. (fold.) 33 cm. (Brit. East African met'l serv. Memoirs. 3.)

SOLAR OBSERVATIONS

SOLAR RADIATION MEASUREMENTS DURING AUGUST, 1932

By IRVING F. HAND, Assistant in Solar Radiation Investigations

For a description of instruments employed and their exposures, the reader is referred to the January, 1932, REVIEW, page 26.

Table 1 shows that solar radiation intensities averaged well above normal values for August at all three stations at which normal incidence measurements are made.

Table 2 shows an excess in the total solar radiation received on a horizontal surface at Washington, Chicago, New York, Fresno, Pittsburgh, and Miami and a deficiency at all other stations for which normals have been computed. The excess in the larger manufacturing cities of New York, Chicago, and Pittsburgh is well marked and indicates that the diminution in the amount of smoke emission due to less manufacturing has permitted an appreciable increase in the amount of radiation received at the ground.

Table 3 shows diminished turbidity for the month as would be expected from the increase in radiation at Washington.

Polarization measurements made at Washington on nine days give a mean of 60 per cent with a maximum of 65 per cent on the 15th. At Madison, measurements made on eight days give a mean of 59 per cent with a maximum of 61 per cent on the 3d. These are above the corresponding August values for Washington. At Madison the values are slightly below the corresponding averages.

On the afternoon of the eclipse of August 31, Mr. George Grimminger of the Aerological Division took observations of the total solar radiation at normal incidence simultaneously with measurements of the red component of solar radiation, also at normal incidence. The results show a slight increase in the proportion of red radiation to the total. Dr. James E. Ives, of the United States Public Health Service, measured the ultra-violet receipt during the time of the eclipse and his results show a decided decrease in the proportion of ultra-violet to the total. As the center of the sun's disk is richer in ultra-violet than the edge and the edge richer than the center in the longer wave lengths, these results were to be expected. The red radiation comprises a large proportion of the total